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09/742,690	12/20/2000	Paul James Davis	C7535(V)	5544

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PATENT DEPARTMENT
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EXAMINER

RAO, MANJUNATH N 19

ART UNIT	PAPER NUMBER
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1652

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,690

Applicant(s)

DAVIS ET AL.

Examiner

Manjunath N. Rao, Ph.D.

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 8, 10, 12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) 15 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 8, 10, 12, 14, 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1652

DETAILED ACTION

Claims 1-3, 5, 8, 10, 12, 14-17 are still at issue and are present for examination. Claims 1-3, 5, 8, 10, 12, 14, 17 are now under consideration. Claims 15-16 continues to be withdrawn from consideration as being drawn to non-elected invention.

Applicants' amendments and arguments filed on 12-20-02, paper No.18, have been fully considered and are deemed to be persuasive to overcome the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 and claims 2-3, 5, 8, 10, 12, 14 and 17 all of which depend from claim 1 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the phrases "*the* fabric" and "a specific part of *the* fabric". There is insufficient antecedent basis for this limitation in the claim.

Claim 1 and claims 2-3, 5, 8, 10, 12, 14 and 17 all of which depend from claim 1 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites that "high binding affinity domain is directed at one of the following:" in line 7.

Art Unit: 1652

However, in line 8, the claim recites that high binding affinity region is directed to "a specific part of the fabric and micro-particles..." rendering the claim indefinite.

Claim 1 and claims 2-3, 5, 8, 10, 12, 14 and 17 all of which depend from claim 1 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the phrase "antibody fragment ...is directed to one of the following: a benefit agent, the fabric, a specific part of the fabric or micro-particles". The claim language as written conveys the meaning that the antibody was raised against a fabric, a specific part of the fabric and a micro-particle. While a variety antibodies can be raised against a variety of antigens which include organic molecules, it is not clear to the Examiner as to how one skilled in the art can raise an antibody of a fabric or a specific part of a fabric and a micro-particle whose chemical make-up is unknown.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the phrase "obtained from a fungal enzyme origin ...". The specific meaning of the above phrase is not clear to the Examiner. It appears that applicants intended to recite "obtained from a fungal enzyme isolated from the fungi *Humicola*...". If that is so amending the claim accordingly would overcome this rejection.

Art Unit: 1652

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 2, the phrase "such as" (in lines 2 and 3-4) renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the phrase "obtained from a bacterial enzyme origin such as ". The specific meaning of the above phrase is not clear to the Examiner. It appears that applicants intended to recite "obtained from a bacterial enzyme isolated from *Bacillus*...". If that is so amending the claim accordingly would overcome this rejection.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 recites the phrase "heavy chain antibody as found in Camelidae". The scope of the above phrase is not clear to the Examiner. It is well known in the art that most mammals have different types of antibodies. It is not clear to the Examiner as to whether the above phrase means that the antibody is a Camelidae antibody.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the

Art Unit: 1652

invention. Claim 8 recites the phrases “photoprotective agents”, “dye fixative agents”, “soil repelling agents” and “soil release agents”. The scope of the above phrase is not clear to the Examiner. A perusal of the specification did not provide a specific definition or range or type of chemical compounds that applicants consider to be the above agents.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 8 recites the phrase “encapsulated materials”. The scope of the above phrase is not clear to the Examiner. Furthermore, the chemical make-up of the encapsulated material is also not clear to the Examiner. It is also not clear whether the high affinity binding domain comprising the antibody portion of the fusion protein is directed to the materials enclosed in a capsule or directed to the material with which the capsule is made of.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 8 recites the phrase “a fabric softening agents” resulting in bad grammar in the claim language. Examiner requests correction. Furthermore, claim 8 recites an improper Markush group. The Markush group should end with “and” but not “or”. Correction is required.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as

Art Unit: 1652

the invention. Claim 14 recites the phrase “and the others are directed”. It is not clear to the Examiner as to what applicants mean specifically by the word “others”. It appears that applicants intended to recite “other specificities”. If that is so amending the claim accordingly would overcome this rejection.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 14 recites the phrase “wherein the antibody fragment is a multi-specific antibody or antibody fragment”. The entire phrase is confusing to the Examiner rendering the phrase indefinite.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 14 recites the phrase “wherein antibody”. It is not clear to the Examiner as to what applicants mean by the above phrase. Furthermore the phrase also appears to be grammatically improper without the word “the” before the word “antibody”.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 14 recites the limitation “the fabric” in line 3. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 1652

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3, 5, 8, 10, 12, 14 and 17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a fusion protein comprising a cellulose binding domain (CBD) and a domain having high binding affinity for another ligand such as a benefit agent (wherein the benefit agent is defined as a fabric softening agent, a perfume, a fragrance, a latex, a resin, a dye, an antioxidant, or an insecticide) with a binding equilibrium constant of lower than 10^{-4} M, and wherein the high binding domain is an antibody or an antibody fragment and wherein its affinity is directed to the said benefit agent does not reasonably provide enablement for any such fusion protein wherein the high binding domain is an antibody directed to "the fabric, a specific part of the fabric or the micro-particles, polymeric lubricants, photoprotective agents, fixative agents, encapsulated materials, soil repelling agents, soil releasing agents, polyester/cotton". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Factors to be considered in determining whether undue experimentation is required, are summarized in *In re Wands* (858 F.2d 731, 8 USPQ 2nd 1400 (Fed. Cir. 1988)) as follows: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claim(s).

Art Unit: 1652

Claims 1-3, 5, 8, 10, 12, 14 and 17 are so broad as to encompass any fusion protein comprising a cellulose binding domain (CBD) and a domain having high binding affinity for another ligand with a binding equilibrium constant of lower than 10^{-4} M, and wherein the high binding domain is an antibody or a antibody fragment whose affinity is directed to any fabric, a specific part of a fabric, micro-particles loaded with benefit agent or benefit agents including polymeric lubricants, photoprotective agents, fixative agents, encapsulated materials, soil repelling agents, soil releasing agents, polyester/cotton. The scope of the claims is not commensurate with the enablement provided by the disclosure with regard to the fusion protein comprising a CBD and an antibody directed to a large number of so called ligands, for which there is no known methods for producing antibodies. Applicants have not demonstrated as to how one skilled in the art can obtain an antibody for example, for a "fabric or a specific part of a fabric or a micro-particle. Since there are no known methods in the art to raise antibodies for a *fabric* it does not make sense as to how a fusion protein comprising a CBD and an antibody directed to a *fabric* can be made. If applicants have indeed developed such a method those skilled in the art will require a knowledge of and guidance with regard to the method of making such antibodies and using such antibodies to make fusion proteins. However, in this case the disclosure is silent regarding any such method.

While techniques to make antibodies against known antigens are known, it is not routine in the art to make antibodies to fabrics or micro-particles whose chemical make up is unknown or uncertain.

The specification does not support the broad scope of the claims which encompasses fusion proteins comprising a CBD and high binding affinity domain comprising an antibody

Art Unit: 1652

raised against a fabric or a part of a fabric because the specification does not establish: (A) a rational and predictable scheme for making antibodies against fabrics, parts of fabric or micro-particles or any of the agents listed above; (B) a rational and predictable scheme for making fusion proteins using such antibodies; and (C) the specification provides insufficient guidance as to which of the essentially infinite possible choices is likely to be successful.

Thus, applicants have not provided sufficient guidance to enable one of ordinary skill in the art to make and use the claimed invention in a manner reasonably correlated with the scope of the claims broadly encompassing fusion proteins comprising a CBD and an antibody directed to a fabric, a specific part of a fabric or a micro-particle. The scope of the claims must bear a reasonable correlation with the scope of enablement (*In re Fisher*, 166 USPQ 19 24 (CCPA 1970)). Without sufficient guidance, making the above fusion protein having the desired characteristics is unpredictable and the experimentation left to those skilled in the art is unnecessarily, and improperly, extensive and undue. See *In re Wands* 858 F.2d 731, 8 USPQ2nd 1400 (Fed. Cir, 1988).

Claims 1-3, 5, 8, 10, 12, 14 and 17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1-3, 5, 8, 10, 12, 14 and 17 are directed to polypeptides comprising antibodies directed to fabrics or specific parts of fabrics or micro-particles or benefit agents whose chemical make-up is unknown. Claims 1-3, 5, 8, 10, 12, 14 and 17 are rejected under this section of 35 USC 112 because the claims are directed to a genus of polypeptides that have not been disclosed in the specification. No description has been provided of the fusion polypeptide sequences

Art Unit: 1652

encompassed by the claim. No information, beyond the characterization that such polypeptides are directed towards fabrics has been provided by applicants which would indicate that they had possession of the claimed genus of modified polypeptides. The specification does not contain any disclosure of the structure of all the polypeptide sequences comprising antibodies raised against *fabrics, specific parts of fabrics or micro-particles or benefit agents whose chemical make-up is unknown*, including fragments and variants within the scope of the claimed genus. The genus of polypeptides claimed is a large variable genus including peptides which can have a wide variety of structure. Therefore many structurally unrelated polypeptides are encompassed within the scope of these claims. The specification does not disclose even a single species of the claimed genus which is insufficient to put one of skill in the art in possession of the attributes and features of all species within the claimed genus. Therefore, one skilled in the art cannot reasonably conclude that applicant had possession of the claimed invention at the time the instant application was filed.

Applicant is referred to the revised guidelines concerning compliance with the written description requirement of U.S.C. 112, first paragraph, published in the Official Gazette and also available at www.uspto.gov.

In response to the previous Office action, applicants have not responded to similar rejections made earlier.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1652

Claims 1-2, 5, 8, 10, 12, 14, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Shoseyov et al. (US 5,719,044, 2-17-1998). This rejection is based upon the public availability of a printed publication or that the invention was already patented by others. Claims 1-2, 5, 8, 10, 12, 14, 17 of the instant application are drawn to a fusion protein comprising CBD and a domain having a high binding domain for another ligand (claim 1) with a binding equilibrium constant of less than 10^{-4} M, and wherein the high binding domain is an antibody or a fragment of an antibody directed at a benefit agent, a fabric or a specific part of a fabric or micro-particles of unknown chemical make-up, wherein the CBD is obtained from a variety of fungi or bacteria including *Clostridium* (claim 2), wherein the high binding domain antibody is heavy chain antibody as found in Camelidae (claim 5), wherein the high binding affinity domain (antibody) is directed to a benefit agent selected from a group as recited in claim 8, wherein the antibody is directed to the fabric (claim 14), polyester, polyester/cotton or wool (claim 10), wherein the CBD and the high binding domains are linked by means of a linker consisting of 2-5 or 2-15 amino acids (claims 12 and 17). Shoseyov et al. disclose an identical fusion protein comprising a CBD obtained from *Clostridium* and a high affinity binding domain, wherein the high binding domain is an antibody of heavy chain type directed to proteins and hormones (see column 4, lines 45-58 or claims 4-5 and figure 12), and wherein the CBD and the high affinity binding domain are linked by means of (cleavage site) linker (see column 5 lines 24-33). Thus Shoseyov et al. anticipate claims 1-2, 5, 8, 10, 12, 14, 17 of this application as written.

Applicants may argue that the above reference does not anticipate every limitation of the claimed invention. Applicants may argue that the reference does not disclose that binding equilibrium constant for the high affinity binding domain with its ligand is lower than 10^{-4} M, or

Art Unit: 1652

that the high binding affinity binding domain is not directed to a benefit agent, or polyester, polyester/cotton, wool etc. or that the antibody is not of the heavy chain as found in Camelidae and that the linker region does not consist of either 2-5 or 2-15 amino acids. However, such arguments would not be persuasive to overcome the rejection because as the inventions are so closely related Examiner takes the position that the fusion protein in the reference has all the features of the fusion protein claimed in the instant invention even though such limitation are not clearly mentioned in the reference. Since the Office does not have the facilities for examining and comparing applicants' protein with the protein of the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product and the product of the prior art (i.e., that the protein of the prior art does not possess the same material structural and functional characteristics of the claimed protein). See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald et al.*, 205 USPQ 594.

In response to the previous Office action, applicants have not presented any arguments against the above rejection. Under the remarks section applicants simply mention that "Claims 7, 9, 11 and 13 were not rejected under 35 U.S.C. 102 over either Shoseyov or Bettiol. Consequently those rejections are considered to be moot". It is highly unclear to the Examiner as to what applicants mean by the above statement. If claims 7, 9, 11 and 13 were not rejected, it is not clear as to how applicants can conclude that rejection of other claims is rendered moot.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1652

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shoseyov et al. as applied to claims 1-2, 5, 8, 10, 12, 14, 17 above, and further in view of Linder et al. (PNAS, 1996, Vol. 93:12251-55). Claim 3 of this application is drawn to a fusion protein comprising CBD and a domain having high binding affinity for another ligand (claim 1), wherein the CBD is obtained from *T.reesei*, wherein the high binding affinity domain is an antibody or an antibody fragment such as a Heavy Chain antibody as found in Camelidae, wherein the domain having a high binding affinity is directed to a "benefit agent" selected from a group as in claim 8, or at the fabric or at polyester etc. or at a specific part of a fabric or at micro-particles loaded with a benefit agent wherein the CBD is connected to the domain by an amino acid linker of 2-15 or 2-5 amino acids.

The reference of Shoseyov et al. as it applies to claims 1-2, 5, 8, 10, 12, 14, 17 has already been discussed above. However, the reference does not teach such fusion proteins comprising the CBD isolated from *T.reesei*.

Linder et al. teach CBD of *T.reesei*. The reference teaches that the *T.reesei* CBD exhibits reversible binding to crystalline cellulose, can be eluted from cellulose by simple dilution and that the binding is temperature sensitive with an increased affinity at lower temperatures.

With the teachings of the above references in hand it would have been obvious to one of ordinary skill in the art to use the CBD taught by Linder et al. in place of the CBD taught by Shoseyov et al. to make a fusion protein comprising *T.reesei* CBD linked to an antibody of

Art Unit: 1652

interest. With a fusion protein comprising a CBD ---which is capable of binding to a cellulose matrix and whose binding can be easily manipulated by just change of temperature—linked to an antibody through an amino acid linker, as taught by Shoseyov et al. it would have been obvious to one of ordinary skill in the art to make a similar fusion protein for affinity purification of a benefit agent such as protein or a peptide wherein the antibody is directed to said protein or peptide. One of ordinary skill in the art would have been motivated to do so as Linder et al. teach that the binding reaction of *T.reesei* CBD to crystalline cellulose is reversible which property can be made use of in elution of fusion proteins bound to cellulose matrix during affinity purification procedure. One of ordinary skill in the art would have been further motivated to use the *T.reesei* CBD as the above reference further teaches that the binding is reversible and temperature sensitive which makes it easier to set the conditions for binding and elution. One of ordinary skill in the art would have a reasonable expectation of success since Shoseyov et al. teach a method of making fusion protein comprising a CBD and Linder et al. teach the CBD from *T.reesei*.

Therefore, the above invention would have been *prima facie* obvious to one of ordinary skill in the art.

In response to the previous Office action, wherein claims were rejected as obvious, applicants have traversed the rejection mainly arguing that the reference of Shoseyov et al. doesn't teach the use of fusion protein comprising CBD and antibody in the detergent composition and does not teach the antibody directed to any of the substrates recited in claim 1. However, Examiner respectfully disagrees. The reference of Shoseyov et al. teach a fusion protein comprising a CBD and an antibody (a recombinant antibody) directed towards protein

Art Unit: 1652

and hormones in general. Even though the reference may not specifically teach that the antibody is directed to the specific antigens claimed in the claim 1, Examiner has given a broad interpretation to the term "antibody" and takes the position that the antibody in the above reference encompasses antibodies directed to all or any antigen including a benefit agent which is a protein or a peptide. Furthermore, claims are not directed to "detergent composition" but directed to just "fusion proteins". Therefore, there is no requirement for the reference to teach "detergent compositions" or the use of said fusion proteins in a detergent composition. On same lines applicants continue to argue that it is not seen how one of ordinary skill in the art would have been led to combine the references since Shoseyov et al. does not teach or suggest any detergent application or any of the problems disclosed by the present application in the field of detergent use. Again Examiner would like to reiterate that present claims are not directed to detergent compositions even though applicants may have made such suggestions in their specification. While claims are read referring to the specification, the contents of the specification does not automatically become the limitations of the claims unless such limitations are recited in the claim. It appears that applicants have assumed that their claims are directed to detergent composition based on the reasons for motivation used by the Examiner in the previous obviousness rejection. In view of the claim amendments and claim cancellations, Examiner has withdrawn the previous obviousness rejection and presented the above rejection using new references.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

Art Unit: 1652

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

None of the claims are in condition for allowance.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Application/Control Number: 09/742,690
Art Unit: 1652

Page 17

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manjunath N. Rao whose telephone number is 703-306-5681. The examiner can normally be reached on 7.30 a.m. to 4.00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy can be reached on 703-308-3804. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-4242 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0196.


REBECCA E. PROBY
PRIMARY EXAMINER
GROUP 1600
1600

Manjunath N. Rao, Ph.D.
March 14, 2003